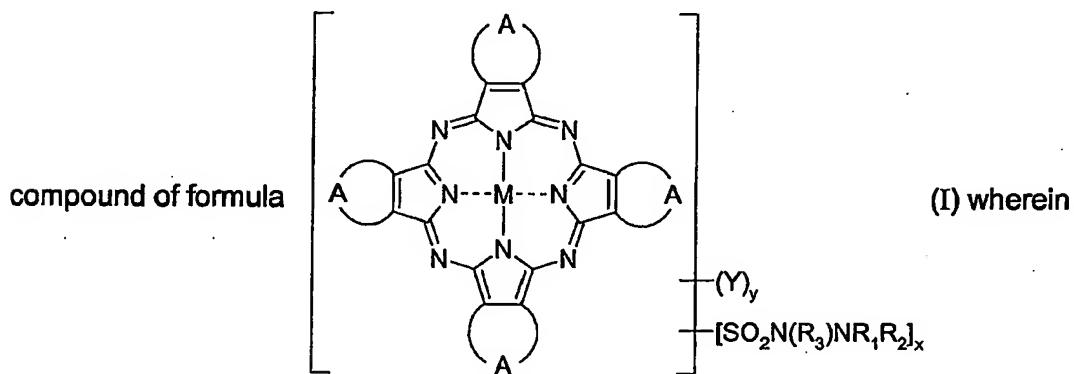


What is claimed is:

1. An optical recording medium comprising a substrate, a recording layer and optionally one or more reflecting layers, wherein the recording layer comprises a



- 5 M denotes 2 hydrogen atoms or a 2- to 4-valent metal which can optionally be coordinated or bonded to 1 or 2 additional ligands;
- each A independently of the others is an unsaturated divalent radical which may be unsubstituted or mono- or poly-substituted by Y and/or by $\text{SO}_2\text{N}(\text{R}_3)\text{NR}_1\text{R}_2$ and together with the two carbon atoms of the fused-on porphyrazine moiety
- 10 forms an aromatic homo- or N-hetero-cyclic ring system;
- each Y independently of all others is halogen, R_4 , OH , OR_4 , SR_4 , NO_2 , NR_4R_5 , O-CO-R_4 , $\text{NR}_4\text{-CO-R}_5$, CN , COOR_4 , CONHR_4 , CONR_4R_5 , CO-R_4 , SO_2R_4 , SO_2NH_2 , SO_2NHR_4 , $\text{SO}_2\text{NR}_4\text{R}_5$, $\text{P}(=\text{O})\text{R}_4\text{R}_5$, $\text{PO}(\text{R}_4)\text{OR}_5$, $\text{PO}(\text{OR}_4)\text{OR}_5$, or $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$ or $\text{C}_3\text{-C}_{12}\text{cycloalkenyl}$ each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_6 , or $\text{C}_6\text{-C}_{14}\text{aryl}$, $\text{C}_4\text{-C}_{12}\text{heteroaryl}$, $\text{C}_7\text{-C}_{18}\text{aralkyl}$ or $\text{C}_5\text{-C}_{16}\text{heteroaralkyl}$ each unsubstituted or substituted by one or more, where applicable identical or different, radicals R_7 ;
- 15 R_1 is hydrogen, COOR_4 , CONHR_4 , CONR_4R_5 , CO-R_4 , SO_2R_4 , $\text{P}(=\text{O})\text{R}_4\text{R}_5$, $\text{PO}(\text{R}_4)\text{OR}_5$, $\text{PO}(\text{OR}_4)\text{OR}_5$, or $\text{C}_1\text{-C}_{12}\text{alkyl}$, $\text{C}_3\text{-C}_{12}\text{cycloalkyl}$, $\text{C}_2\text{-C}_{12}\text{alkenyl}$ or $\text{C}_3\text{-C}_{12}\text{cycloalkenyl}$ each unsubstituted or substituted by one or more, where

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applicable identical or different, radicals R₆, or C₆-C₁₄aryl, C₄-C₁₂heteroaryl, C₇-C₁₈aralkyl or C₅-C₁₆heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₇;

R₂ and R₃ are each independently of the other hydrogen or R₈;

- 5 R₄, R₅ and R₈ are each independently of the others C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₂-C₁₂alkenyl or C₃-C₁₂cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₆, or C₆-C₁₄aryl, C₄-C₁₂heteroaryl, C₇-C₁₈aralkyl or C₅-C₁₆heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₇;
- 10 R₆ is halogen, hydroxy, O-R₉, O-CO-R₉, S-R₉, CO-R₉, cyano, carboxy, carbamoyl, COO-R₉, CONH-R₉, CONR₉R₁₀, SO₂R₉ or SO₃R₉;
- R₇ is halogen, nitro, cyano, hydroxy, R₁₁, C(R₁₂)=CR₁₃R₁₄, O-CO-R₁₅, formyl, NR₁₅R₁₆, CONH₂, CONHR₁₅, CONR₁₅R₁₆, SO₂R₁₅, SO₂NH₂, SO₂NHR₁₅, SO₂NR₁₅R₁₆, COOH, COOR₁₅, OCOOR₁₅, NHCOR₁₅, NR₁₅COR₁₇,
- 15 NHCOOR₁₅, NR₁₅COOR₁₇, P(=O)R₁₅R₁₇, P(=O)R₁₅OR₁₇, P(=O)OR₁₅OR₁₇, or C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₂-C₁₂alkenyl, C₃-C₁₂cycloalkenyl, C₁-C₁₂alkyl-thio, C₃-C₁₂cycloalkylthio, C₂-C₁₂alkenylthio, C₃-C₁₂cycloalkenylthio, C₁-C₁₂-alkoxy, C₃-C₁₂cycloalkoxy, C₂-C₁₂alkenyloxy or C₃-C₁₂cycloalkenyloxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₆;
- 20 R₉ and R₁₀ are each independently of the other C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₂-C₁₂alkenyl, C₃-C₁₂cycloalkenyl, C₆-C₁₄aryl, C₄-C₁₂heteroaryl, C₇-C₁₈aralkyl or C₅-C₁₆heteroaralkyl; or
- R₉ and R₁₀ together with the common N are pyrrolidine, piperidine, piperazine or morpholine each unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl;

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- R₁₁ is C₆-C₁₄aryl, C₄-C₁₂heteroaryl, C₇-C₁₈aralkyl or C₅-C₁₆heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₁₈;
- R₁₂ is hydrogen, cyano, halogen, nitro, or C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₂-C₁₂alkenyl or C₃-C₁₂cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₁₂alkoxy or C₃-C₁₂cycloalkoxy radicals, or C₆-C₁₄aryl, C₄-C₁₂heteroaryl, C₇-C₁₈aralkyl or C₅-C₁₆heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₆ and/or by nitro;
- 10 R₁₃ and R₁₄ are each independently of the other NR₁₅R₁₆, CN, CONH₂, CONHR₁₅, CONR₁₅R₁₆ or COOR₁₆;
- R₁₅, R₁₆ and R₁₇ are each independently of the others R₁₁, or C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₂-C₁₂alkenyl or C₃-C₁₂cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C₁-C₁₂alkoxy or C₃-C₁₂cycloalkoxy radicals; or
- 15 R₁₅ and R₁₆ together with the common N are pyrrolidine, piperidine, piperazine or morpholine each unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl; or carbazole, phenoxazine or phenothiazine each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₁₈;
- 20 R₁₈ is nitro, SO₂NHR₉, SO₂NR₉R₁₀, or C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₁-C₁₂alkyl-thio, C₃-C₁₂cycloalkylthio, C₁-C₁₂alkoxy or C₃-C₁₂cycloalkoxy each substituted by one or more, where applicable identical or different, radicals R₆; and
- x is a number from 1 to 8, preferably from 2 to 4, and y is a number from 0 to 15, the sum x + y being a number from 1 to 16;
- 25 wherein from 2 to 10 identical or different radicals of formula (I) can be bonded to one another by one or more additional bonds between two or more identical or

different R₁, R₂, R₃ or Y, so that dimers, trimers or oligomers having from 4 to 10 phthalocyanine units are formed.

2. An optical recording medium according to claim 1, wherein in formula (I)

- A is 1,4-butadienylene;
- 5 • M denotes 2 hydrogen atoms, Mg, Al, Si, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Zr, Mo, Pd, Sn, Hf, Pt or Pb, optionally coordinated or bonded to 1 or 2 additional ligands, depending upon valency;
- 10 • Y is hydrogen, bromine, iodine, OR₄, NO₂, CN, unsubstituted C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl or C₂-C₁₂alkenyl, or C₆-C₁₀aryl or C₇-C₁₂aralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R₇;
- 15 • R₁ is COOR₄, CONHR₄, CONR₄R₅, CO-R₄, SO₂R₄, or C₆-C₁₀aryl, C₄-C₈hetero-aryl or C₇-C₁₂aralkyl each unsubstituted or substituted by R₇;
- 20 • R₂ and R₃ are each independently of the other hydrogen or R₈;
- 25 • R₄, R₅ and R₈ are each independently of the others C₃-C₈alkyl, C₃-C₈cycloalkyl or C₃-C₈alkenyl each unsubstituted or substituted by R₆, or C₆-C₁₀aryl or C₇-C₁₂aralkyl each unsubstituted or substituted by R₇;
- R₆ is halogen, hydroxy, O-R₉, O-CO-R₉, CO-R₉, cyano or SO₂R₉;
- 20 • R₇ is halogen, nitro, cyano, O-CO-R₁₅, NR₁₅R₁₆, CONHR₁₅, CONR₁₅R₁₆, SO₂R₁₅, SO₂NH₂, SO₂NHR₁₅, SO₂NR₁₅R₁₆, COOH, COOR₁₅, NHCOR₁₅, NR₁₅COR₁₇, or unsubstituted or substituted C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₁-C₁₂alkoxy or C₃-C₁₂cycloalkoxy;
- 25 • R₉ and R₁₀ are each independently of the other C₁-C₈alkyl, C₃-C₆cycloalkyl, C₂-C₈alkenyl, C₃-C₆cycloalkenyl or phenyl;
- R₉ and R₁₀ together with the common N are pyrrolidine, piperidine, piperazine or morpholine each unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl;

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- R₁₅, R₁₆ and R₁₇ are each independently of the others C₁-C₈alkyl, C₅-C₆cyclo-alkyl, C₂-C₈alkenyl or C₅-C₆cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy or C₁-C₄alkoxy radicals, or phenyl or benzyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, nitro, C₁-C₈alkyl or C₁-C₄alkoxy radicals;
 - R₁₅ and R₁₆ together with the common N are pyrrolidine, piperidine, piperazine or morpholine each unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl; and/or
- 10 • x is a number from 1 to 4, and y is a number from 0 to 4,
- wherein from 2 to 5 identical or different radicals of formula (I) can be bonded to one another by one or more additional bonds between two or more identical or different R₁, R₂, R₃ or Y, so that dimers, trimers or oligomers having 4 or 5 phthalocyanine units are formed.
- 15 3. An optical recording medium according to claim 1 or 2, wherein in formula (I)
- M is Co(II), Ni(II), Cu(II), Zn(II), Sn(II) or Pb(II), especially Cu(II);
 - Y is hydrogen, bromine or OR₄, very especially hydrogen;
 - R₁ is COOR₄, CONHR₄, CONR₄R₅, CO-R₄, SO₂R₄, or unsubstituted or substituted phenyl or C₇-C₁₂aralkyl, very especially CO-R₄, SO₂R₄ or unsubstituted or substituted phenyl or C₇-C₁₂aralkyl;
 - R₂ and R₃ are each independently of the other hydrogen or C₁-C₁₂alkyl;
 - R₄, R₅ and R₈ are each independently of the others C₃-C₈alkyl unsubstituted or substituted by R₆, or phenyl unsubstituted or substituted by R₇;
 - R₆ is halogen, hydroxy, O-R₉, O-CO-R₉, CO-R₉, cyano or SO₂R₉;

- R₇ is halogen, nitro, cyano, O-CO-R₁₅, NR₁₅R₁₆, or C₁-C₁₂alkyl, C₃-C₁₂cycloalkyl, C₁-C₁₂alkoxy or C₃-C₁₂cycloalkoxy each unsubstituted or substituted by R₆;
 - R₉ and R₁₀ are each independently of the other C₁-C₄alkyl or phenyl;
 - R₉ and R₁₀ together with the common N are piperidine or morpholine each 5 unsubstituted or mono- to tetra-substituted by C₁-C₂alkyl;
 - R₁₅, R₁₆ and R₁₇ are each independently of the others C₁-C₄alkyl unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy or C₁-C₄alkoxy radicals; and/or
 - R₁₅ and R₁₆ together with the common N are piperidine or morpholine each 10 unsubstituted or mono- to tetra-substituted by C₁-C₄alkyl.
4. An optical recording medium according to claim 1, 2 or 3, wherein the recording layer contains from 1 to 100 % by weight, preferably from 20 to 100 % by weight, especially from 50 to 100 % by weight, of the compound of formula (I) or of a mixture of compounds of formula (I).
- 15 5. An optical recording medium according to claim 1, 2, 3, 4 or 5, wherein substrate, recording layer, reflector layer and, if present, covering layer are arranged in that order.
6. An optical recording medium according to claim 1, 2, 3, 4 or 5, additionally comprising a covering layer, wherein substrate, reflector layer, recording layer and 20 covering layer are arranged in that order.
7. An optical recording medium according to claim 1, 2, 3 or 4, wherein the recording layer has marks of different lengths, the shortest of which are almost circular and the longest of which are of a length corresponding to approximately four times the width.

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8. A method of recording or playing back data, wherein the data on an optical recording medium according to claim 1, 2, 3, 4, 5, 6 or 7 are recorded or played back at a wavelength of from 300 to 500 nm.
9. A method according to claim 8, wherein the recording takes place at a linear speed v of at least $4.8 \text{ m} \cdot \text{s}^{-1}$ and an output P of at most $[v/0.1 \text{ m} \cdot \text{s}^{-1}]^{1/2} \text{ mW}$.
10. Use of a compound of formula (I) according to claim 1, 2 or 3 in the production of an optical recording medium.
11. An optical recording medium comprising a substrate having depressions, a recording layer and optionally one or more reflecting layers, wherein the recording layer has a thickness of from 30 to 80 nm in the depressions and a thickness of from 20 to 70 nm next to the depressions, the difference between the layer thickness in the depressions and the layer thickness next to the depressions being a maximum of 20 nm, preferably a maximum of 10 nm.
12. An optical recording medium according to claim 11, wherein the recording layer comprises a compound of formula (I) according to claim 1, 2 or 3.
13. A method of recording or playing back data, wherein marks of different reflectivity are created or read on an optical recording medium according to claim 11 or 12 using a laser beam.
14. A method according to claim 13, wherein the marks are of lower reflectivity.
15. A method according to claim 13 or 14, wherein the laser beam is directed through the substrate into the depressions of the recording layer.
16. A method according to claim 13, 14 or 15, wherein the laser beam has a wavelength of from 300 to 500 nm.